II. Remarks

Reconsideration and re-examination of this application in view of the above amendments and the following remarks is herein respectfully requested.

Claim Rejections - 35 U.S.C. §103(a)

Claims 1-4, 6-7, 9, 11-12, 14, 17 and 19 were rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. 5,413,316 to Easter (Easter) in view of U.S. 3,134,404 to Ziccardi (Ziccardi).

Claim 1 is directed to a vehicle air suspension system including a main air valve, an additional spring volume, and a switching device that selectively connects the two. Further, claim 1 recites that "when the switching device is in a closed position, [it] reduces the cross section to a specific residual opening cross section, such that an effective closure of the connecting line results by use of a Helmholtz effect."

Easter does not disclose a vehicle air suspension system in the sense of the present invention, i.e. comprising a main air spring volume and an additional air spring volume, which could selectively be connected to or disconnected from the main volume in order to change the effective spring characteristics by means of a change of the total effective air volume. Instead, Easter only discloses a variation of the effective air pressure within the air spring 1 (which actually is the only "main-spring"). In this connection please note that the part with reference number 2 is not an "additional air spring volume" as interpreted by the Examiner,

but a "supply of compressed air or other fluid" (column 3, lines 64-66). The supply 2 is connected to air spring 1 by a pair of fluid supply lines 3, 4 each of which contains a control valve 5. Thus, the pressure (volume) of a "main air chamber" 12 of the air spring 1 can be adjusted by supplying air into the "main chamber" and/or an "auxiliary reservoir" 16 (Fig. 2, 3) or 28 (Fig. 4), whereby, however, the "main chamber" always is divided from the "auxiliary reservoir" via a flexible membrane 21, 27. Therefore, there is indeed no valve between the "main chamber" and the "auxiliary reservoir", by means of which the "auxiliary reservoir" could selectively be connected to or disconnected from the "main chamber".

The valves 5 are not at all comparable with the switching device of claim 1, as each of valves 5 is in any case closed during the dynamic suspension conditions and only shortly opened in a static adjusting condition. Therefore the valve 5 must seal tight in the closed condition, because in the static adjusting condition the air volume does not oscillate. It would therefore not at all be obvious to design the valves with a specific residual opening, as the "Helmholtz effect" can not occur in a static condition, but only in a condition in which the air is oscillating with a specific natural frequency.

Due to the fact that Easter does not disclose a switching device between a main volume and an additional volume of an air suspension it would not be obvious for one skilled in the art to consider Easter, either alone nor in combination with another document, e.g. Ziccardi.

Further, Ziccardi also does not at all disclose a valve with a residual opening in the closed condition, but explicitly a leak-proof valve (co umn 1, line 25, column 2, line 55), especially for use in connection with water closets for lavatories. Naturally, such waver valves must be leak-proof (seal-tight) in order to prevent a water leakage in the closed condition.

Further, the combination of Easter and Ziccardi would result in the valve of Ziccardi being used in place of the valve 5 of Easter. This would indeed not lead to the inventive concept to close a connecting line between a mai n air spring volume and an additional air spring volume by means of a valve havir g a specific residual opening in a "closed" condition by means of the Helmholtz effect, which can only occur if the air volume oscillates at a specific excitation frequency. There are two main reasons: (1) according to both documents the valves are leak-proof in the closed condition; and (2) none of the citations shows a valve between main and additional volumes of an air suspension.

Therefore, clearly claim 1 is patentable over the cited prior art.

Further, we would like to note that in the European Search Report, Easter was not at all cited (surely as it was deemed as absolutely not relevant), and Ziccardi was mentioned only under category A (technological background and thus not relevant). In consequence, the EPO already has accepted the patentability in the parallel EP case (publ. No. EP 1 457 722) on the basis of the original claim 1 (communication acc. To Rule 51 (4) EPC received at our office on December 13 2005).

Claims 2-4, 6-7, 9, and 11-12 are patentable for at least the reasons given above in support of claim 1.

Claim 14 recites a constrictor valve that "can rotate between an open and closed position, with a specific residual opening cross section remaining in the closed position." As discussed above, neither Easter or Ziccardi provide for a valve with a residual opening cross section in the closed position. Therefore, Easter and Ziccardi do not teach or suggest the present invention as provided in claim 14.

Claims 17 and 19 depend from claim 14 and are, therefore, patentable for at least the same reasons given above in support of claim 14. Accordingly, applicants respectfully request withdrawal of the rejections under 35 U.S.C. §103.

Conclusion

In view of the above amendments and remarks, it is respectfully submitted that the present form of the claims are patentably distinguishable over the art of

record and that this application is now in condition for allowance. Such action is respectfully requested.

Respectfully submitted by,

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